

Appl. No. 10/774,815  
Amdt. dated September 12, 2006  
Reply to Office Action of May 12, 2006

Amendments to the Drawings:

Included in the amendment are an "Annotated Sheet Showing Changes" and a "Replacement Sheet" for Fig. 3B. In Fig. 3B, control signals 25 was inadvertently shown with the arrow indicating a wrong direction of the control signals. The control signals 25 has been amended to correct the direction to be "from the instruction decoder/controller 38" as supported in the text of the present patent col. 6, lines 51-54.

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Remarks

The present amendment responds to the Official Action dated May 12, 2006. A petition for a one month extension of time to respond and authorization to charge Deposit Account No. 50-1058 the large entity extension fee of \$120 accompany this amendment. The present application is a divisional of U.S. Serial No. 10/036,789 filed December 21, 2001 which is a continuation of U.S. Serial No. 09/323,609 filed June 1, 1999, now U.S. Patent No. 6,338,129 which is a divisional of U.S. Serial No. 08/885,310 filed June 30, 1997, now U.S. Patent No. 6,023,753. Claims 48-62 were elected by telephone, and this election is affirmed by this amendment. Due to this election, claims 44-47 were withdrawn from further consideration by the Examiner and are now canceled without prejudice. The Official Action rejected claims 48-53 under 35 U.S.C. §112 as being indefinite. Claims 48-62 were rejected as being anticipated by claims in applicants' prior U.S. Patent No. 6,892,291 and U.S. Patent No. 6,338,129. Claims 48-51, 54-59, and apparently 60-62 were rejected based on Barker et al. U.S. Patent No. 5,717,943 (Barker). These grounds of rejection are addressed below. Claims 44-47 have been canceled without prejudice, and claims 48-55 and 58-60 have been amended to be more clear and distinct. Claims 48-62 are presently pending.

IDS

The information disclosure statement mailed March 5, 2004 and apparently received by the P.T.O. on March 8, 2004, is resubmitted with copies of all of the listed items.

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### Amendments to the Specification

As recommended in the Official Action, the second occurrence of "now U.S. Patent No. 6,023,753" has been deleted from the amendment filed on February 9, 2004.

### Section 112 Second Paragraph

The Official Action rejected claims 48-53 under 35 U.S.C. §112 as being indefinite with regard to the wherein clause in lines 6-8 of claim 48 and claim 49. The wherein clause of lines 6-8 of claim 48 has been amended to be more clear and distinct. The wherein clause now reads:

wherein each connection path established through the first cluster switch is communicatively equivalent to a connection path between two nearest neighbor processing elements disposed in the torus network.

Claim 49 has been amended to add:

a second cluster switch connected to the first cluster switch, each processing element of the second cluster connected to the second cluster switch, the first and second cluster switches being further operable to establish a connection path between one processing element of the first plurality of processing elements with a processing element of the second plurality of processing elements.

### Double Patenting

The Examiner cited claims 1, 6, and 13 of prior U.S. Patent No. 6,892,291, claims 1-3, 13, and 15 of prior U.S. Patent No. 6,338,129, or claims 5-7, 14-16, and 25-26 without citing a U.S. patent for these later claims. The Office Action mailed September 19, 2005, which was withdrawn, cited claims 1-28 of prior U.S. Patent No. 6,023,753 which is assumed to be the patent in which the relied upon claims 5-7, 14-16, and 25-26 are found. These three patents are

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all commonly owned with the present application. The cases cited in making the rejection are all double patenting cases. MPEP § 804 addresses double patenting. Statutory double patenting prevents the issuance of claims to identical subject. The former claims and the claims as presently amended do not claim the identical subject matter. Consequently, any rejection must be built upon obviousness double patenting. As a result, a terminal disclaimer is submitted to overcome this rejection.

#### The Art Rejections

As addressed in greater detail below, Barker does not support the Official Action's reading and the rejections based thereupon should be reconsidered and withdrawn. Further, the Applicants do not acquiesce in the analysis of Barker made by the Official Action and respectfully traverse the Official Action's analysis underlying its rejections.

The Official Action rejected claims 48, 49, 54, and 50-62 based on Barker. In Barker, Fig. 18, each of the cluster controllers 0-N is not a cluster switch but rather, a "cluster controller is a device that controls input/output (I/O) operations for more than one device or functional unit connected to it." Also, a control function is described where a "cluster controller issues commands to each of the PEs in the PMEs, and these can be stored in the PME to control their operation in one mode or another." Barker, col. 4, lines 8-10 and col. 24, lines 7-9. This controlling function is different than a switching function of a cluster switch.

Barker also describes only connections between PEs that are nearest neighbor nodes of a torus organization of processing nodes or between hypercube nodes which differ in a single

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dimension of a hypercube organization of processing nodes. "An array of clusters results in the 4 dimensional torus or hypercube structure illustrated in Fig. 10." Barker, col. 40, lines 61-62. In Barker, a connection between a processing node and its corresponding transpose processing node is not possible without going through linking processing nodes. Barker does not teach and does not make obvious "a connection path between two processing elements of the first plurality of processing elements, wherein the two processing elements are transpose nodes of the torus network and wherein each connection path established through the first cluster switch is communicatively equivalent to a connection path between two nearest neighbor processing elements disposed in the torus network" as claimed in amended claim 1. See also amended claims 54 and 60.

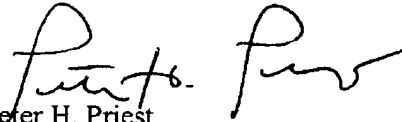
Since dependent claims 49-53, 55-59, and 61 and 62 depend from and contain all the limitations of the amended claims 48, 54, and 60, respectively, claims 49-53, 55-59, and 61 and 62 distinguish from the references in the same manner as claims 48, 54, and 60 and claims 48-62 are in order for allowance.

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Conclusion

All of the presently pending claims, as amended, appearing to define over the applied references, withdrawal of the present rejection and prompt allowance are requested.

Respectfully submitted,



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